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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,622	11/09/2001	Giacomo Stefano Roba	05788.0189	5933

7590 06/28/2004
Finnegan, Henderson, Farabow,
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EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,622

Applicant(s)

ROBA ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 31- 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “bottom chimney” is indefinite as to its meaning. First it is noted that the specification does not clearly set forth an explicit definition, thus Applicant is not acting as lexicographer. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F3d 985, 989 (Fed. Cir.1999). Second, Examiner did a text search for “bottom chimney”; it does not exist in Class 65: the class in which fiber-making patents are classified. Thus it appears the term is not an art-recognized term. Third, one usually thinks of chimneys as devices that are at above structures from which smoke/gas is removed – not the bottom. Fourth, Page 1, lines 25-28 of the present specification indicates that chimneys are cylindrical tubes, but figure 1 shows a chimney (B) which is not a cylindrical tube. For these reasons, one of ordinary skill would not be able to discern whether a particular structure is a bottom chimney or not. Therefore one could determine the bounds of the invention.

Likewise “top chimney” is indefinite. Also for the top chimney, the structure adds cold gases to the furnace, rather than serving to remove hot gases. Thus it seems to

function as a complete opposite of a chimney as one customarily used. Therefore “top chimney” makes the claim indefinite as well.

Claim 34, 3rd to last line refers to “said annular outlet”. There is no antecedent basis for an annular outlet. It is unclear if this is suppose to be “annular chamber” or “angled outlet” or something else.

Claim 34 now has a newly added limitation “said annular outlet defining a downward-angled flow path from the annular outlet towards the heating zone.” It is not understood what is meant by this. If the path goes to the heating zone, then the path (i.e. the annular outlet) is right at the heating zone – and if the annular outlet is right at the heating zone, then there can be no path connecting the two – they are already in direct contact. But most importantly, this is not disclosed in the specification – thus one cannot turn to the specification to see what is meant by this language.

Claim 31 requires that the distributor body forcibly directs the conditioning gas “into” the top chimney. However figure 1, shows that the distributor body 34 is part of the top chimney, and thus any gas that is already in the distributor body has already been placed “into” the top chimney. Thus examiner is unclear if the distributor body is part of the top chimney and/or how to interpret the limitations regarding the flow of gas “into” the top chimney.

Claim 34 has the same problem.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 34-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support for the newly added limitation "said annular outlet defining a downward-angled flow path from the annular outlet towards the heating zone." Examiner could not see any explicit support, nor any implicit support. None of the flow paths that are defined by an outlet go from the outlet towards anything else. All of the paths that are defined by outlets are limited by the outlets. IN other words, since the structure defines the path, where there is no structure, there is no path which is defined by the structure.

IT is noted that Applicant's figure 6 has flow paths. However those paths are not reasonably defined by any structure; one of ordinary skill would read the claims as the paths being only those portions which are within the passageways. The path that gas flows (when it is not confined by the outlet) depends upon the method – not the structure. If the gas pressure and velocity are low, one would expect that convention would influence the flow of gases. Likewise a thick preform would have one set of gas flow paths, and a thin preform would have another set of flow paths.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-33, 38-39 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paek 4608473 in view of Harding 4988374 and Kazuya JP 08091862 as per Applicant's translation thereof.

Paek is cited as a typical induction furnace, but it does not disclose a distributor or the "bottom chimney". Harding is cited as evidence that it is well known to provide structures on tops of furnaces to seal the furnace and to keep preforms clean, by blowing gas at an angle – just like applicant does. See Harding, col. 1, lines 29-45, col. 3, line 24. It would have been obvious to improve the Paek method by using a distributor and seal on the top, so as to keep contaminants away from the preform

Kazuya teaches that using the tapered shape structure (that appears to be the same or nearly the same as Applicant's bottom chimney) decreases fluctuations in the outer diameter of the preform. It would have been obvious to use the Kazuya teaching to improve the Paek method, for the advantages that Kazuya teaches.

As to the top chimney: it is deemed that Paek's upper tube 62 is an "top chimney" because Applicant has not defined "top chimney" in a manner which would exclude 62. The rest of the limitations are clearly met.

As to the newly added limitation that the distributor body being configured to substantially tangentially receive conditioning gas. First it is noted that receiving gas is a process, and not structure. Second, it is noted that the claim does not limit what it is tangential to. It is deemed that the gas that is put into curved tube 15 (of Harding) would be introduced at an angle that is tangential to the curve of tube 15. Or more exactly: it is clear that the structure of Harding is such that one can introduce air into 15 tangentially to the curve thereof. The actual introduction being a step, not structure. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claims 32-33: The angle is not taught in Harding. It would have been obvious to choose one of the angles as a simple matter of design choice, with no new or unexpected results. Alternatively, it would have been obvious to perform routine experimentation to find an angle which kept the preform clean as that is the intended purpose.

Claim 50: it would have been obvious to make the susceptor as large as desired- depending upon how large a preform one was using.

Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paek, Harding, and Kazuya as applied to claim 31 above, and further in view of Uhm EP 0867412.

As discussed in previous actions, Uhm discloses rigid graphite to be a superior insulation material in the induction furnace art. It would have been obvious to improve the Paek furnace, by using the Uhm insulation material. See how the rest of the claims are met as discussed in the prior Office action.

Response to Arguments

Applicant's arguments have been considered but are not persuasive. It is argued that the terms "top chimney" and "bottom chimney" are definite because they are clearly set forth in the specification at pages 19, 27-28, 34-36 and figures 1, 2 and 6. Examiner studied these portions but remains confused as to what these terms mean – for the reasons set forth in the rejection. There is no definition for either of these new terms. It is noted that the specification does not clearly set forth an explicit definition, thus Applicant is not acting as lexicographer. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F3d 985, 989 (Fed. Cir.1999). It is also noted that the Response fails to address the reasons set forth in rejection. Most importantly, Applicant argues that Paek's tube does not disclose a top chimney – and then gives reasons why. It is unclear those reasons corresponds to what Applicant intends to be a "top chimney" [it must be connected to the upper end of a furnace body and it must comprise on its upper portion a distributor body]. One ordinary skill would be unclear if those two things

is all that is needed for structure to be a top chimney, or is there additional requirements.

Although Applicant's disclosure clearly discloses a top chimney and one can tell it encompasses Applicant's specific embodiments, there is no indication as to what else it does or does not encompass. If a potential infringer is to use a similar structure, he has no idea whether it is or is not a "top chimney". The portions of the specification that Applicant points to fail to reasonably apprise one of ordinary skill what is covered by the terms "top chimney" and "bottom chimney". Alternatively: Applicant has failed to point out how those portions (pages 19, 27-28, 34-36 and figures 1, 2 and 6) set forth what is meant by those terms. Applicant merely alleges they set forth what is meant, but with no explanation.

It is argued that the cited references do not have the distributor body that is configured to tangentially receive and to uniformly introduce and forcedly direct the conditioning gas. As indicated above, Harding's structure can receive gas that is introduce tangentially to the hose. As to uniformly introduce: such depends on the method of use – clearly by supplying gas under uniform conditions (e.g. pressure and rate) the out put would also be uniform over time. Likewise for forcedly directing the gas: if the gas is forcedly introduced into the pipe 15, the distributor would direct the gas with substantially the same force.

As to Kaiser, that portion of the rejection is not made in the present rejection – in view of Applicant's amendments to the claims.

It is argued that Paek's upper tube is not a "top chimney" because it is a suscepor. Neither the claims nor the specification define "top chimney" in a way that precludes it from also being able to function as a susceptor.

It is also argued that Paek's upper tube is not the "top chimney" because it is not connected to the upper end of a furnace body. From figure 3, it is clear that the upper tube is at the top of the furnace body, it is linked, joined or connected thereto. Is there a mechanical connection, such as bolts or a latch? Applicant's figure 1 seems to suggest that no connecting device is required. Rather, using the a broad meaning for "connecting" encompass "contacting". Regardless, it is not an inventive concept to connect things, "the unity or diversity of parts would depend more upon the choice of the manufacturer... than on any inventive concept" In re Lockhart, 90 USPQ 214 (CCPA 1951).

Claim 34 and claims depending therefrom are not presently indicated as containing allowable subject matter. Examiner does not see anything in those claims that meets all the requirements of both 35 USC 112 and 35 USC 103.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann

6-25-04

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Primary Examiner
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jmh